

The Quiet Crisis: Obesity Among Children Aged 0-5 and Links to Later Health Problems

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by

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Overview

A rapidly expanding proportion of our population is overweight or obese--which is increasing health problems at great human and economic costs. A problem once characterized primarily by social stigma has transformed into a national health epidemic: obesity may soon surpass smoking and become the number-one contributor to premature death.¹ This trend belies the apparent national obsession with being thin, portrayed as the norm by our celebrities and in our advertising.

As with adults, the number of overweight or obese children aged 0-5 continues to increase at unprecedented rates. Infancy seems to be an especially critical period for the establishment of lifelong patterns of obesity.² While infants should receive a diet higher in fat than would be healthful later in life, research shows that excessive weight gain in infants and children aged 0-5 (and for older children as well) strongly correlates with adult obesity. Overweight adults, in turn, statistically have many more serious health problems. The research literature demonstrates a cause-and-effect relationship between childhood obesity and severe adult health consequences. Because the eating and exercise patterns that can lead to obesity in adults begin in childhood, the first few years of life are the best time to establish healthy eating patterns and if necessary make nutritional and physical activity changes necessary to maintain a healthy weight.

How is Obesity Defined?

The general definition of obesity used by the research community is, in general terms, the same as in the popular media: indicating excess body weight or fat. In general terms, weight is categorized by percentage of body fat, which is commonly called the "body fat index" (BMI). In simple terms, this is the ratio of fat to other components of body weight. A higher BMI means higher body fat. While "obesity" and "overweight" have been terms used throughout the medical and social science literature for years, a consistent definition of these terms as applied to children had not been established prior to 1999.³ Previously, a child's weight to height ratio being greater than the 95 percentile compared to the weight to height ratios of a large population of similar age children was used in the medical community as the screening indicator for obesity. In June of 2000, the U.S. Department of Health and Human Services (Centers for Disease Control-CDC) released new height to weight charts, which now relate to BMI-for-age. Many sources now

identify these BMI-for-age charts as the predominant defining scientific source for overweight and obesity in children.⁴ These tables define children aged 0 to 5 over the 85th percentile of BMI-for-age as “at risk for overweight” and those over the 95th percentile of BMI-for-age as obese (although CDC now uses the term “overweight”). CDC notes that 60 percent of obese children already have at least one risk factor while 20 percent have two or more risk factors for cardiovascular disease as adults.

How Large is the Problem?

The weight of American adults has increased steadily at record levels since 1980, and in American children since the 1970’s, with upsurges occurring in both men and women, among all racial groups, and across all age levels. One source found 61 percent of adults in the U.S. overweight or obese in 1999.⁵ Another shows that rates of adult obesity have tripled since the 1950’s.⁶ In yet another, the rate of adult obesity increased 75% in just 14 years (1989-1994), with a rise of 74% for children during the same time. No evidence could be found that showed a decline in weight gain for any American sub-population. The figures above hold true for all Americans, but some sub-groups face an even larger problem. Although poor, minority urban families are most likely to have excess body fat, poor, rural white communities also show larger-than-average increases.⁷

Unfortunately, the problem seems especially chronic among children: one source indicated that the proportion of overweight children in this country has doubled in the last 20 years.⁸ Children are also becoming considerably heavier than in the past. Another source noted “children who are overweight are 20% to 30% heavier now than they were 10 years ago. We can’t even imagine the medical costs we will be seeing in the future.”⁹

In Shasta County, data reported by Shasta County Public Health for the National Pediatric Nutritional Surveillance demonstrated that about 13 percent of 6,187 children assessed in 1999 were overweight (above the 95th percentile of weight to height ratio compared to similar age children), suggesting Shasta County may have a problem above the national—and already epidemic—level. Among higher risk populations the problem is even worse. Current Shasta County WIC data show that 18 percent of children assessed (aged 0-5) were above the 90th percentile. One-half of these (9%) were above the 98th percentile. Shasta County Head Start data for children 0-5 from 1998 defined 22 percent of enrolled children as overweight.

Why is this Problem Growing?

Genes alone play a modest role in the problem of obesity. Furthermore, no research has established the existence of genes specifically necessary for the development of obesity.¹⁰ Instead, nearly all studies indicate that the current increases in weight gain on a population basis have a strong relationship to lifestyle shifts and to food industry—especially fast food industry—practices in the United States. Two simple factors influence these weight gains: children are much less active than in years past and they are offered excessive quantities of poorly nutritious foods.

Children now watch an average of four hours of television per day.¹¹ Unfortunately, new sources of entertainment that keep children in chairs are expanding all the time, including the internet, video games, DVD, and the ever-expanding numbers of television channels over cable or

satellite. Recent research from Stanford University shows that just reducing a child's use of television, video, and computer games between a quarter and a third could reduce their weight significantly. The same research team found that one-half of elementary school children surveyed had a television in their bedroom.¹² Television not only reduces physical activity levels but also exposes children to advertisements for fat-producing foods. McDonald's spends more than \$1 billion dollars a year on advertising with Coke not far behind at \$800 million. Meanwhile, healthy advertising such as the national 5-A-Day fruit and vegetable campaign was only funded at \$1 million annually.¹³ Young children, as well as the general population, are getting many more positive images regarding fast food than they are about healthy lifestyle choices.

What are the Health Risks of Being Overweight?

Obesity is well-documented as linked to many health risks, such as:¹⁴

- Coronary heart disease
- Type II diabetes
- Endometrial cancer
- High blood pressure
- Breast cancer
- Gallbladder disease
- Colon cancer
- Osteoarthritis and joint problems (knee, hip)
- Sleep apnea and other sleep disorders
- Fatty liver
- Stroke
- High cholesterol
- Prostate cancer

Most of these diseases strike individuals in middle age, but the problem starts years earlier in youth. However, one malady connected strongly to weight—Type II diabetes—does strike children with increasing frequency: in one study it affected 16 percent of overweight children in 1994, compared to only four percent in 1982. Most of these children were between the ages of 10 and 14 and the onset was directly linked to obesity, which in most cases began before they were five years old.¹⁵ Other consequences also affect children immediately, such as social discrimination, lowered self-esteem and depression. Once established in childhood, problems with weight become a lifelong struggle with both weight and resulting health problems.

What are the Costs of this Epidemic?

One estimate of the cost of caring for those sickened with mostly preventable obesity-related illnesses tops \$70 billion per year, about half of which is paid for by the government through MediCare and Medicaid (in California, Medi-Cal).¹⁶ According to the Surgeon General, the overall economic cost of obesity in the U.S. was about \$117 billion in 2000.¹⁷ The number of work days lost to illness attributable to obesity amounts to 53.6 million days per year. The lost productivity costs employers an additional \$4.06 billion annually.¹⁸

Summary

Obesity is a national health crisis. Study after study shows that the percentage of our population dealing with being overweight or obesity is on a rapid increase with no signs of retreat. Most concerning are the numbers of young children who are becoming overweight and obese, setting a life-long pattern which for many will end with prolonged suffering from health problems, early death, or debilitating illness or injury, decreasing the quality of these valued citizens' lives. The picture in Shasta County is even worse, with the proportion of overweight children aged 0 to 5 apparently exceeding national levels. These data together suggest that a radical course of action may be necessary to turn the tide of this expanding, dangerous, and costly health epidemic. The community can play an important role in reducing this Shasta County epidemic. Families and communities have many resources and strategies that can effectively address this problem. The research cited in this paper suggests several opportunities for local action.

First, parents may appreciate being made aware of the physical and mental health consequences to their children of too much television, video games, and computers. The value to very young children of active play and regular physical activity could not be overemphasized. Parents may not understand the true dangers a poor diet and too much sugar and fast food pose for their very young children.

Second, it is not enough to educate parents on nutritious diets. Policies, laws, and norms related to food industry--as well as local institutional and community practices--are critical. Some examples of possible approaches in this area include: 1) increasing physical activity, such as support for parks and open spaces, "Turn Off TV Day" campaigns, and physical education in child care facilities; 2) healthier eating, such as nutritious child care food choices and public education campaigns related to the role fast food plays in child obesity; and 3) supporting other activities that prevent or treat the negative health impacts of obesity, such as health insurance coverage or IRS tax deductions for preventing or treating the health impacts of childhood obesity. A community-focused initiative addressing this problem could identify and implement many other strategies to reduce this public health problem.

Winning the battle over obesity is not going to be found in a pill or a diet. Maintaining a healthy weight can be a lifelong struggle, a struggle for an increasing number of our community members that starts in the first four years of life. Therefore, healthy habits need to be established at an early age before weight gain becomes an issue. It is much easier to maintain a healthy weight than to lose excess pounds. That an ounce of prevention is worth a pound of cure is true for individuals and families as well as for populations and communities. If parents, institutions, and communities make healthy choices, then the fight against obesity-related disease and medical care costs may no longer be a losing battle.

For more information about obesity and the current and future health of our children and what you can do about it, please refer to the contact information on the following page::

Shasta County Public Health: www.shastapublichealth.net, Karin Ratcliff, M.A., R.D., 530-245-6843

Center for Weight and Health: www.cnr.berkeley.edu/cwh/, Joan Ikeda, 510-642-2790

Centers for Disease Control: <http://www.cdc.gov/nccdphp/dnpa/obesity/index.htm>

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- ¹ Farely, T., Choen, D. (2001) *Fixing a fat nation*. Washington monthly. Dec, 2001, Vol. 33, Issue 12.
 - ² Law, C.M, et al. (2002). Fetal, Infant and Childhood Growth and Adult Blood Pressure. A longitudinal Study from Birth to 22 Years of Age. *American Heart Association Journal Circulation*. February 4. 10.1161/hc0902.104677.
 - ³ Centers for Disease Control Web Site: <http://www.cdc.gov/nccdphp/dnpa/obesity/basics.htm>.
 - ⁴ Conversation with Gail Woodward-Lopez, MPH, RD Associate Director, Center for Weight and Health, UC Berkeley. (4/1/02)
 - ⁵ *The surgeon general's call to action to prevent and decrease overweight and obesity*. Retrieved from the Surgeon General's Website, Overweight and Obesity Fact Sheet: At a Glance. http://www.surgeongeneral.gov/topics/obesity/fact_glance.htm
 - ⁶ Farely, T., Choen, D. (2001)
 - ⁷ Sobal, J. (2001) *Cultural, historical, and social influences on body weight*. Cornell University. Retrieved from the Cornell Cooperative Extension on 3/4/2002. <http://www.cce.cornell.edu/food/expfiles/topics/sobal/sobaloverview.html>
 - ⁸ *Helping your overweight child*. International Food Information Council. (1998). Retrieved on 2/20/2002: <http://www.ific.org/proactive/newsroom/release.vtml?id=17580>
 - ⁹ Brownlee, S., Maretens, E., McDowell, J., Sieger, M. (2002) Too heavy, too young. *Time*. Jan, 2002, Vol. 159, Issue 3, p. 88.
 - ¹⁰ Shinn, E., Poston, C. (2001) *Why we are overweight: genes vrs. Lifestyle*. Retrieved from Weightfocus.com. http://www.weightfocus.com/focus_article.asp?f=weight_gain&c=envsgenes
 - ¹¹ Farely, T., Choen, D. (2001)
 - ¹² Robinson, T. Stanford University study cited in Squires, S. Obesity-linked diabetes rising in children. *Washington Post*. November 3, 1998; page Z07
 - ¹³ National Cancer Institute: 5 A Day for Better Health Program Evaluation Report http://dccps.nci.nih.gov/5ad_5_mess.html
 - ¹⁴ *The problem of overweight in children and adolescents*. Retrieved from the Surgeon General's informational website on 2/24/2002 at http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_adolescents.htm.
 - ¹⁵ Squires, S. Obesity-Linked Diabetes Rising in Children. *Washington Post*. November 3, 1998; p Z07
 - ¹⁶ Farely, T., Choen, D. (2001)
 - ¹⁷ *The surgeon general's call to action to prevent and decrease overweight and obesity*. http://www.surgeongeneral.gov/topics/obesity/fact_glance.htm
 - ¹⁸ *ShapeUp America!*. <http://www.shapeup.org/general/index.html>